



On Your Mark is a monthly column written by Geoffrey Peckham, CEO of Clarion Safety Systems and chair of both the ANSI Z535 Committee and the U.S. Technical Advisory Group to ISO Technical Committee 145- Graphical Symbols. Over the past two decades he has played a pivotal role in the harmonization of U.S. and international standards dealing with safety signs, colors, formats and symbols. This article is courtesy of Clarion Safety Systems © 2012. All rights reserved.

as seen in 

Guarding Labels

BY GEOFFREY PECKHAM

In this column, we'll explore the importance of guards on products and machinery, and the best practices to be considered when it comes to labeling to improve safety and reduce liability.

Guards. Switches. Light curtains. As an engineering professional, you're familiar with how important these safety mechanisms are in protecting workers from accidents and injuries that could have been prevented. But just as important as the guard itself, when it comes to improving safety and reducing liability, is another type of safety device: your safety labels. Guard, switch, and light curtain labels are critical communication tools because they can reinforce your intended safe operation criteria that guards must be in place during operation of the equipment. First, let's take a step back and look at the significance of guarding. When it comes to product design and machinery safety, if you're not able to eliminate the risk through design, you guard against it. Yet, guarding is not failsafe; guards and covers get removed, interlocks get circumvented, doors are left open, programmable controllers have their software modified. The results can be devastating.

Communicating risk becomes the last line of defense. This is where safety labels are key. Guard labels remind people that safety is a critical issue. Guard labels are typically placed on and inside of doors, on or inside of panels, next to on/off switches and underneath guards. As such, they are able to reinforce training and serve as a final reinforcement of the importance of the safety devices you have installed on your products or in your facilities.

When it comes to the proper format and design of your guarding labels (see Figure 1, page 2), many of the general principles contained in the current best practices in safety labeling become important: using the ANSI Z535 standards as a guide to formatting, explaining both what the hazard is and how to avoid it, being clear and concise in your messaging, and using quality materials in the label's manufacture to meet the durability requirements for the label's intended environment of use. Adding to this, there are several specific areas that should be carefully considered in order to best communicate your safety information:

- **Location:** Guard labels need to be noticed so they need to be placed where the operator interacts with the machine. This is the right place because the label serves as a final reminder at the point of potential interaction with the hazard. Viewers now better understand the potential hazards of operating a piece of equipment without guards in place and proper procedures related to maintenance. The primary point of these labels is also to emphasize the necessity of making sure that all guards and safety devices are restored and operational.
- **Repetition:** As we explored in the December 2012 column, safety labels can work as a "system" to reinforce each other and convey important safety information. This is a key

concept in guarding labels, which work together with the other safety labels on the machine to reinforce and remind people of potential hazards. As an example, “underguard” safety labels (ie., with a word message such as “Stay clear! If you can read this sign, a guard has been removed”) are usually used in tandem with other labels that are placed on the exterior of equipment that warn about the specific hazard, such as a crush hazard or entanglement hazard. The “underguard” message is especially critical if the hazard-specific label is not visible, which could occur if it was placed on a guard or cover that has been removed.

- **Graphical symbols:** Symbols, such as the prohibition symbol or symbols to represent “do not touch” or “do not enter” should be used when applicable. Keep in mind, though, that there will be some cases when pictorializing

the hazard may not be practical because so many different potential hazards exist behind a guard, door, or cover. For example, to communicate potential hazards related to a limit switch, rather than showing a graphical symbol, it may be most effective to place a label beside the switch with a word message only, such as “Do not bypass or interfere with this limit switch.”

Designing effective guarding labels can be a complex task. But the best practices described above are your guide to developing labeling that helps to prevent injuries and save lives. 📌

For more information about safety signs and symbols, visit www.clarionsafety.com.

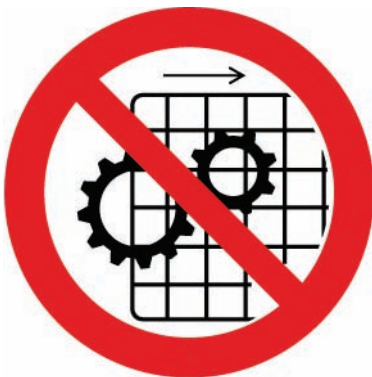


Figure 1: “Do Not Operate with Guards Removed/Gears Beneath” safety symbol (at left) and a best practice safety label designed to warn against operating machinery without the proper guard in place (at right). (Label design ©Clarion Safety Systems.)